

The Claims

1. A data isolation system for software and data maintenance, back up and recovery for a computer wherein dynamic data files are identified and passed into a hidden partition on a hard disk of the computer, the passing being by one or more selected from the group consisting of: copying and redirection.
2. A system as claimed in claim 2, wherein the group further includes filtering and access control.
3. A system as claimed in claim 1 or claim 2, wherein automatic back ups are made to the dynamic data files in the hidden partition whenever the dynamic data files are accessed and modified.
4. A system as claimed in any one of claims 1 to 3, wherein the dynamic data files include the computer's operating environment so that the computer's operating environment can be restored from the dynamic data files in the hidden partition.
5. A system as claimed in any one of claims 1 to 4, wherein the dynamic data files in the hidden partition include data up to the time of a failure of the computer's system.
6. A system as claimed in any one of claims 1 to 5, wherein compression is used for at least one file of the dynamic data files in the hidden partition.
7. A system as claimed in any one of claims 1 to 6, wherein encryption is used for at least one of the dynamic data files in the hidden partition.
8. A system as claimed in any one of claims 1 to 7, wherein at least one of the hidden partition and its content is neither manageable nor accessible by the computer's operating system; and the dynamic data files in the hidden partition are not accessible by any software application on the computer.
9. A system as claimed in claim 8, wherein prior to copying the dynamic data files into the hidden partition, all software installed on the computer, including a primary operating system for the computer, is segregated into at least one static routine and the dynamic data files, dynamic data files including system configuration files, and user data files.

10. A system as claimed in claim 9, wherein the segregation comprises categorization.
- 5 11. A system as claimed in claim 9 or claim 10, wherein all data sent from the primary operating system to the dynamic data files and all data sent from the dynamic data files to the primary operating system is passed to the dynamic data files in the hidden partition.
- 10 12. A system as claimed in any one of claims 1 to 11, wherein the dynamic data files in the hidden partition are continuously updated and the original dynamic data files in the main partition are continuously updated.
- 15 13. A system as claimed in any one of claims 1 to 12, wherein on system recovery, a last back up system environment in the hidden partition, including the copied dynamic data files, is recovered.
- 20 14. A system as claimed in claim 13, wherein the dynamic data files in the hidden partition include all data up to an instant before the recovery process was invoked, and the system environment includes the primary operating system and software.
- 25 15. A system as claimed in any one of claims 1 to 14, wherein upon new software being installed in the computer, the installation is delayed until a back up of the existing system environment to the hidden partition is completed and, after completion of the back up, the installation is resumed.
- 30 16. A system as claimed in claim 15, wherein if system instability or failure is encountered after the installation or running of the new software, the computer system restores the previous operating environment from the back up.
- 35 17. A system as claimed in any one of claims 1 to 16, wherein upon a new device driver being installed in the computer, the installation is delayed until a back up of the existing system environment to the hidden partition is completed and, after completion of the back up, the installation is resumed and, if system instability or failure is encountered after the installation or running of the new device driver, the computer system restores the previous operating environment from the back up.
18. A system as claimed in any one of claims 1 to 17, wherein software application and its dynamic data files are copied to the hidden partition as independent modules.

19. A system as claimed in any one of claims 1 to 18, wherein the dynamic data files in the hidden partition work as active data files for an software application and are continuously updated.
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20. A system as claimed in claim 10 or any one of claims 11 to 19 when appended to claim 10, wherein the segregating or categorizing of the data files of is by use of a data isolation technique that consists of one or more selected from the group consisting of:
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- (a) automatic selection of commonly used software application of the operating system;
 - (b) automatic selection of commonly used software application
 - (c) selection of software application by a user of the computer; and
 - (d) selection of files or file folders by the user
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21. A system as claimed in claim 20, wherein for (a), (b) and (c) all dynamic data files belonging to the software application will be automatically segregated and stored to the hidden partition.
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22. A system as claimed in claim 20, wherein for (d) the selected files or all the dynamic data files belonging to the selected file folders will be automatically segregated and stored to the hidden partition.
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23. A system as claimed in claim 11 or any one of claims 12 to 22 when appended to claim 11, wherein an additional I/O driver is placed between a file system I/O interface and a disk driver for access control, intercepting, filtering and re-directing data for the dynamic data files in the hidden partition, the additional I/O driver using an secondary operating system.
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24. A system as claimed in claim 23, wherein the access control, intercepting, filtering and re-directing is by the use of regulatory, matching, and fulfillment tables.
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25. A system as claimed in claim 23 or claim 24, wherein the additional I/O driver is part of one or more selected from the group consisting of: the disk driver, the file system I/O interface, and the operating system.
26. A system as claimed in any one of claims 23 to 25, wherein the secondary operating system is different to the primary operating system.

27. A system as claimed in any one of claims 23 to 26, wherein back up and recovery use one of the primary operating system and the secondary operating system.
28. A system as claimed in any one of claims 1 to 27, wherein the dynamic data files stored in the hidden partition are protected.
29. A system as claimed in any one of claims 1 to 28, wherein the dynamic data files stored in the hidden partition are used as active working files and are continuously updated.
30. A system as claimed in claim 29, wherein a plurality of back-up copies of each dynamic data file in the hidden partition is made in the hidden partition using a first-in-first-out sequence.
31. A system as claimed in claim 30, wherein upon accessing and modifying an working data file, the plurality of back-ups are updated according to a pre-assigned back-up schedule.
32. A system for management of access to a host computer by a remote computer wherein access by the remote computer is in accordance with a software security access policy in the host computer.
33. A system as claimed in claim 32, wherein the software security access policy has a file access right and control mechanism.
34. A system as claimed in claim 33, wherein the file access right and control mechanism is used to selectively provide protection to selected software application and their respective dynamic data files.
35. A system as claimed in claim 33 or claim 34, wherein the file access right and control mechanism of the host computer by the remote computer are controlled by the host computer and include:
- (a) selection of software application/programs;
 - (b) selection of dynamic data files of the software application;
 - (c) selection of configuration files;
 - (d) selection of data file or folder; and
 - (e) selection of the type of the operation to be performed by the remote computer.

36. A system as claimed in claim 35, wherein the selected file, or files belonging to the selected folder, are automatically given the access right while any others will be denied access.
- 5 37. A system as claimed in claim 35 or claim 36, wherein the file access right and control mechanism of the host computer are pre-determined by a category of the remote host computer and different remote computers are given different access rights for different usage.
- 10 38. A system as claimed in claim 37, wherein all files including program, configuration and user data are automatically given the access right while all others are denied access.
- 15 39. A system as claimed in any one of claims 34 to 38, wherein the host computer has an additional I/O driver placed between a file system I/O interface and a disk driver for access control, intercepting, filtering and re-directing data for the dynamic data files, the additional I/O driver using an secondary operating system.
- 20 40. A system as claimed in claim 39, wherein the access control, intercepting, filtering and re-directing is by the use of regulatory, matching, and fulfillment tables.
- 25 41. A system as claimed in claim 39 or claim 40, wherein the additional I/O driver is part of one or more selected from the group consisting of: the disk driver, the file system I/O interface, and the primary operating system.
- 30 42. A system as claimed in any one of claims 39 to 41, wherein the secondary operating system is different to the primary operating system.
43. A system as claimed in any one of claims 39 to 42, wherein back up and recovery use one of the primary operating system and the secondary operating system.
44. A system as claimed in any one of claims 39 to 43, wherein the remote access is through the secondary operating system.
- 35 45. A system as claimed in claim 32 or any one of claims 33 to 44 when appended to claim 32, wherein the selected software application and their respective dynamic data files are identified and are located in at least one partition of the primary operating system of the host computer.

46. A system as claimed in claim 32 or any one of claims 33 to 44 when appended to claim 32, wherein dynamic data files are identified and passed into a hidden partition on a hard disk of the host computer, the passing being by one or more selected from the group consisting of: coping and redirection.
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47. A system as claimed in any one of claims 30 to 46, wherein the host computer using diagnostic utilities to allow remote technical support by the remote computer.
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48. A system for providing an external back up for at least one computer to at least one hidden partition of a centralized back up server, wherein dynamic data files of the at least one computer are identified and passed into the at least one hidden partition on a hard disk of the central back up server, the passing being by one or more selected from the group consisting of: coping and redirection.
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49. A system as claimed in claim 48, wherein the at least one hidden partition of the central back up server is accessed using at least one selected from the group consisting of a: LAN, WAN, VPN, Intranet and Internet.
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50. A system as claimed in claim 48 or claim 49, wherein critical applications and their dynamic data files are stored and protected in the at least one hidden partition of the central back up server by using encryption and are only able to be accessed by authorized users.
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51. A system as claimed in any one of claims 48 to 50, wherein the at least one computer has an additional I/O driver placed between a file system I/O interface and a disk driver for access control, intercepting, filtering and re-directing data for the dynamic data files, the additional I/O driver using an secondary operating system.
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52. A system as claimed in claim 51, wherein the access control, intercepting, filtering and re-directing is by the use of regulatory, matching, and fulfillment tables.
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53. A system as claimed in claim 51 or claim 52, wherein the additional I/O driver is part of one or more selected from the group consisting of: the disk driver, the file system I/O interface, and the primary operating system.

54. A system as claimed in any one of claims 51 to 53, wherein the secondary operating system is different to a primary operating system of the at least one computer.
- 5 55. A system as claimed in claim 54, wherein back up and recovery use one of the primary operating system and the secondary operating system.
56. A system as claimed in any one of claims 51 to 55, wherein communication with the central back up server is through the secondary operating system.
- 10 57. A system as claimed in any one of claims 1 to 31 further including a system for management of access to a host computer by a remote computer as claimed in any one of claims 32 to 47.
- 15 58. A system as claimed in any one of claims 1 to 31 or claim 57, further including a system for providing an external back up as claimed in any one of claims 48 to 56.
- 20 59. A system for management of access to a host computer by a remote computer as claimed in any one of claims 32 to 47 further including a system for providing an external back up as claimed in any one of claims 48 to 56.
60. Computer usable medium comprising a computer program code that is configured to cause a process or to execute one or more functions to perform a system as claimed in any one of claims 1 to 59.